Objection to Claim Rejections Under 35 USC § 103

The last O.A. rejected the Claims 6-8 as being unpatentable "over Mahany [US 6,665,536] in view of Marshall [US 6,829,214]". Applicant requests withdraw of these rejections for the following reasons:

The filing date of Marshall is later than applicant's current invention; therefore it should not be considered as prior art.

Regarding claim 6, Fundamentally, Mahany's disclosure is regarding a wireless access point of wireless local area network (col.1 line 25-29) for wireless networking device, where the access point may have multiple wireless radio; however, all the remote device or client only have one wireless communication unit. Another fundamental difference between Mahany and the applicant's current invention is that all the AP in Mahany must connect to same LAN infrastructure. If the second AP has LAN broken, Mahany provide a wireless backup connection from the second AP to the first to continue the second AP's connection to LAN via the back up wireless link.

Further in detail:

1) The purpose, function and the number of a plurality of wireless radios are different between Mahany's disclosure and the applicant's current invention. According to Mahany, the purposes of having multiple wireless radios are:

   a) "increase reliability is to have all of the radios in an access point operating on the same channel simultaneously. This creates an antenna diversity scheme which helps eliminate the negative effects associated with multipath interference problems since each wireless adapter has its

own antenna" and the antennas need to be "be positioned apart from each other a minimum distance of at least one-fourth wavelength" (col.1, lines 55-66)

b) "Another way to improve reliability is to have one wireless adapter within the access point monitor the transmission of another wireless adapter thereby creating a Local Loop Back. This provides a means for determining if a particular wireless adapter is working properly. (col.2, lines 3-7)".

c) "Increased reliability is also achieved when there is a break in the infrastructure between access points. In this case, an access point which is no longer connected to the host via the infrastructure can establish communication with an access point that is still connected to the host side infrastructure by having each access point dedicate one of their wireless adapters to infrastructure communication" (col.2, lines 11-17)

Therefore, the wireless networking AP of Mahany is different than the RWNL device of applicant's current invention, where, a) the wireless networking unit can form a wireless sub-link to remote device and, b) the RWNL device can aggregate the bandwidth of all the wireless sublinks and, c) all the wireless sublink can be redundant among themselves and, d) the redundant wireless link formed by two RWNL devices connect two separate networks together via their wired networking port.

2) Mahany does not have multiple wire networking units. All the Wireless Access Point only need one wired networking port for connecting with LAN or "THE HOST COMPUTER NETWORK (fig.1, 26, fig.2,26, fig.3, 33)" It is technically inappropriate to connect one wireless access point device to same wired LAN with two or more wired port, nor does Mahany intend to do so. In Mahany's embodiment, two AP are connected to the same computer network LAN line (see fig.3, 35, 36, 33). This is different than the applicant's current invention

where two LAN networks (see fig.3, 310, 320) is connected via two RWNL devices (see fig.3 10A, 10B).

The multiple wired unit in tho applicant's current invention is an extended networking feature that is supported by the system function means. This is another reason of the difference of the system function means between Mahany and the applicant's current invention.

3) Mahany does not disclose " .. said system function means to control networking communication packets to be redistributed among all the wireless networking units for aggregating the networking bandwidth and providing redundancy among the wireless units" as pointed out by the last OA. Mahany only discloses one wireless backup for LAN connection break of second AP (see fig.3, col.1 lines 43- col.2 line 52, col.7 lines 31-39). Mahany's devices and feature cannot perform multiple wireless to wireless redundancy between device like the embodiment of the applicant's current invention. (see fig.3). The system function means is different between Mahany's disclosure and the application's current invention.

4) Further according to the discussion above, Mahany's disclosure cannot provide wireless networking bandwidth aggregation.

Therefore, the applicant suggests the last OA rejects the claim 6 of the applicant's current application over Mahany is improper. The applicant respectfully requests withdraw of this rejection.

Regarding claim 7, the last OA points out that "Mahany further discloses a method wherein the said RWNL device may include a control unit (MAC processor and/or CPU processor) for extending the system control to wireless networking unites ... extend the controlling capability via the control unit. See gif.3, and col.1, lines 43-col.2, line52, col.3, lines 18-67, col.5, line 47- col.6, line

37" According to Mahany each of his radio is attached with on "MAC PROCESSOR" (see fig.3) that is the intermediate function between the radio and the "CPU PROCESSOR" (see fig.3). Specifically, Mahany discloses normal AP design approach "The low level processor could be a MAC (media access control) processor implementing a portion of the data link layer with the ISO protocol model. The access point also includes a Central Processing Unit (CPU) which controls all of the higher level communication protocol ..(col.1 lns 49-54)" Further, Mahany intends to disable the malfunctioning wireless adapter as "Central Processing Unit can disable the malfunctioning wireless adapter and use only the properly functioning wireless adapters. (col.2 lns 7-9)". This case can only work if the MAC controller is still functioning properly, but it is impossible to disable "the malfunctioning wireless adapter" if the MAC is malfunctioning. However, if this happened to the applicant's design, the additional control unit is the second path for the CPU to disable or perform further control to the "the malfunctioning wireless adapter". It is clear that in this aspect, the applicant's current invention is much more advanced than Mahany.

In the applicant's current invention, there is only one control unit (see fig.1 109), and the system architecture between radios, control unit, and processor unit (see fig.1) is different than Mahany's disclosure (see fig1, 2, 3). The applicant's control unit is to provide additional control to radio performance of the system and the processor. It is common in the art of wireless system design that the system function to control the radio has to go through MAC controller. However, the applicant's current invention's control unit provides an additional control path to radio beside the normal path (Fig.3 109 and its interaction with 111-114, and 107, 108). The control unit is different than the MAC/Processor as provided by Mahany.

Therefore, the applicant suggests the last OA's rejection of the claim 7 of the applicant's current application over Mahany is improper. The applicant respectfully requests withdraw of this rejection.

Regarding claim 8, the last OA pointed out that "Mahany further discloses a redundant wireless link (RWNL)" As discussed before, Mahany discloses a different redundant wireless link than the applicant's current invention. The applicant's current invention is to networking two different wired networks (fig.3 310 and 320) via the multi-channel wireless network link (fig.3 301-304) formed two RWNL devices (fig.3 10A and 10B). However, specifically, Mahany only discloses one wireless backup for LAN connection break of second AP (see fig.3, col.1 lines 43- col.2 line 52, col.7 lines 31-39). Where all the APs are connecting to LAN INFRASTRUCTURE (fig.3, 33). There is no wireless to wireless redundancy between Mahany's devices. It is not possible nor Mahany's intention to aggregate the wireless communication capacity of wireless to wireless redundant link between any two AP. Because of the fundamental difference between Mahany's disclosure and the embodiment of the applicant's current invention, the rest details pointed out by last OA are different as well. E.g. In order to have different system features, the system functions that need to do the wireless control must be different. Further in detail, according to Mahany "Referring now to FIG. 3, a portion of a distribution network (30) utilizing high reliability access points is shown. The distribution network (30) includes an infrastructure (33) and two high reliability access points (35 and 36). Access point (35) includes a CPU processor (37) and two wireless adapters (38 and 39). (col.5, lines 46 -52)" and "a break (45) in the infrastructure (33) has occurred. Access point (35) is upstream to the break with respect to the host computer network and thus is not immediately affected by the break (45). However, access point (36) is downstream to the break (45) and therefore is no longer connected to the host computer network. When a situation like this occurs, the downstream

access point (36) will begin attempting to communicate with an upstream access point using wireless communication. (col.5, line 54-62)." It is clear that in the embodiment, according to Mahany:

a) only one wireless link (fig.3, 30) is established between two AP (fig.3, 35, 36)

b) two other radio (fig.3, 38 of 35, 43 of 36) as part of AP function continue to communication with other device in the wireless local network.

c) Wired networking ports (fig.3, 37 of its extension, and 41 of extension) supposedly connect to same LAN 33, however due to the break 45, the downstream AP (fig.3, 36) lost wired connection. Mahany's both AP were connected to same LAN, and configured to connect to same LAN, even when the LAN connection breaks (45), the second AP (36) still keep the configuration for the same LAN, it is not possible at this point to attach a wired LAN to wired port of the second AP (36).

d) The networking design is different; the wireless link 30 of Mahany (fig.30) is for the second AP 36 to continue to have networking with main LAN after break.

In conclusion, referring to above discussion of a) and b), it is impossible for Mahany to aggregate wireless networking bandwidth between two AP when there is only one link between them, and the rest of the communication going to some other devices. As referring to c), both AP should be connected to same LAN, and, this is different than the applicant's current invention where LAN1 and LAN2 (Fig.3, 310 and 320) are connecting two RWNL devices (Fig.3, 10A and 10B) respectively.

Therefore, the applicant suggests the last OA's rejection of the claim 8 of the applicant's current application over Mahany is improper. The applicant respectfully requests withdraw of this rejection.

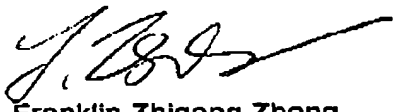
Conclusion

For all of the above reasons, the applicant submits that the specification and claims are now in proper form, and that the claims all define patentably over the prior art. Therefore he submits that this application is now in condition for allowance, which action he respectfully solicits.

Conditional Request For Constructive Assistance

Applicant has amended the specification and claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition of allowance, Applicant respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this applicant in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,



Franklin Zhigang Zhang

4717 Spencer street,
Torrance, CA 90503
Tel: (310)901-2631
Email: endeavour@franklints.com

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